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AUTHOR	Harwood, Henrick
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ABSTRACT

Based on a decade of evaluation experience, the Center for Substance Abuse Treatment (CSAT) has developed the Integrated Evaluation Methods (IEM) Package, a series of conceptual and methodological applications to enhance CSAT-funded evaluation activities. Products in the IEM Package are organized within an evaluation framework constructed on the basis of accumulated experiences among evaluation professionals. The framework is based upon evaluation strategies, structures, and approaches appropriate for substance abuse treatment evaluators and providers. This paper presents state-of-the-art models addressing issues related to coordination of treatment and evaluation activities, and integration of clinical, performance, and evaluation information. Specifically, it identifies an approach that will enable the evaluation team to measure costs and to demonstrate the value of their services. Appendix A is "Integrated Evaluation Methods Package: A Guide for Substance Abuse Treatment Knowledge-Generating Activities--Executive Summary," and Appendix B is "Editor's Note." (Contains 1 figure, 9 tables, and 8 references.) (MKA)

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INTEGRATED EVALUATION METHODS

ADDING "VALUE" TO CSAT DEMONSTRATIONS: THE WHAT, HOW, AND WHY OF COST ANALYSIS

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INTEGRATED EVALUATION METHODS

ADDING "VALUE" TO CSAT DEMONSTRATIONS: THE WHAT, HOW, AND WHY OF COST ANALYSIS

Prepared by:

Henrick Harwood
The Lewin Group
3130 Fairview Park Drive
Suite 800
Falls Church, VA 22042

Revised July 1999

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FOREWORD

Over the last 10 years the Center for Substance Abuse Treatment (CSAT) has accumulated a great deal of experience in substance abuse treatment evaluation implemented through coordinating centers, cross-site efforts, and national studies. The importance and value of integrating ongoing evaluation activity into a system for treating substance abuse problems is widely recognized. Also widely recognized, however, is that current evaluation-generated knowledge and practice are often under-utilized, due in part to the lack of an integrated approach to capturing information with which to measure and improve treatment effectiveness, efficiency, and performance. CSAT recognizes that such an integrated evaluation approach will more effectively support current and future knowledge generating activities.

Based on a decade of evaluation experience, CSAT has developed the Integrated Evaluation Methods (IEM) Package, a series of conceptual and methodological applications, including concept papers, technical assistance materials, and analytic tools, to enhance CSAT-funded evaluation activities. Products in the IEM Package are organized within an evaluation framework constructed on the basis of accumulated experiences among internationally known treatment service evaluation professionals. Thus, the framework is based upon evaluation strategies, structures and approaches appropriate for substance abuse treatment evaluators and providers. The framework follows a standard set of evaluation activities: planning, selecting a design, developing data requirements and collection instruments, collecting and analyzing the data, and reporting the evaluation findings. (A summary description of the IEM Package is contained in Appendix A to this document.)

This concept paper and its companion documents, *Integrated Evaluation Methods: A Guide for Substance Abuse Treatment Knowledge-Generating Activities; Self-Adjusting Treatment Evaluation Model; Building Team Capability to Fully Implement and Utilize the Self-Adjusting Treatment Evaluation Model; Performance Measurement for Substance Abuse Treatment Services*, and *Client Levels of Functioning as a Component of Substance Abuse Treatment Services Evaluation* present state-of-the-art conceptual models addressing issues related to coordination of treatment and evaluation activities, and integration of clinical, performance and evaluation information. Specifically, this concept paper identifies an approach that will enable the evaluation team to measure costs and to demonstrate the value of their services.

Sharon Bishop
Project Director
NEDTAC

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This paper, together with the companion documents listed in Appendix A (the Integrated Evaluation Methods Package), was developed for CSAT by the National Evaluation Data and Technical Assistance Center (NEDTAC) under the guidance and direction of Ron Smith, Ph.D., Program Evaluation Branch, Office of Evaluation, Scientific Analysis, and Synthesis (OESAS). Charlene Lewis, Ph.D., former Deputy Director, OESAS, supported this and other associated efforts, with the result that state-of-the-art evaluation concepts were incorporated into many of CSAT's and SAMHSA's evaluation initiatives. Jerry Jaffe, M.D., former Director, OESAS, also contributed his breadth of experience in the substance abuse treatment and evaluation fields and his dedication to high quality treatment services evaluation and provided the national level leadership necessary for CSAT to promulgate these activities.

Caliber Associates was the prime contractor for NEDTAC in partnership with Computech, Inc.; the Lewin Group; Capital Consulting Corporation; the Center for Substance Abuse Research (CESAR), University of Maryland; the Alcohol Research Group (ARG), Public Health Institute; the Drug Abuse Research Center (DARC), University of California, Los Angeles; and the Urban Institute. Many people within the NEDTAC team contributed to this effort. Henrick Harwood, the Lewin Group, was responsible for development and writing of the initial document. Patricia Devine, Jacquelyn Lowery, Melody Moore, and Judith Walton, Caliber Associates, contributed to editing the final document. Thanks are also due to Robin Walthour, Erica Sorohan, and Donna Caudill for their many contributions to the quality of this document.

I. INTRODUCTION

The Center for Substance Abuse Treatment (CSAT) supports the integration of ongoing evaluation within substance abuse treatment activities so as to demonstrate treatment service effectiveness and to improve treatment services and their outcomes. To this end, CSAT recommends the use of state-of-the-art evaluation methods and tools in planning, designing, and implementing treatment services evaluations. This document provides a discussion of the need for and types of cost analysis in the evaluation of knowledge-generating activities.

Demonstrating and documenting the "efficiency" and/or "value" of treatment services are among the greatest challenges facing the substance abuse treatment field today. Put simply, efficiency/value is the ratio of outcomes to cost, and both types of data are necessary to effectively manage treatment services. While efficiency/value has always been important in managing a treatment system, this challenge is becoming increasingly acute.

1. CONTEXT FOR THE ADDING "VALUE" TO CSAT DEMONSTRATIONS DOCUMENT

CSAT's major evaluation goals are to: (1) increase knowledge about substance abuse treatment services; (2) improve treatment services by applying knowledge gained through knowledge development and application (KD&A) activities; (3) develop analytic methods and approaches for use in knowledge-generating activities; and (4) develop substance abuse treatment analysis databases. To meet these goals, CSAT has been sponsoring KD&A initiatives including activities that focus on homelessness, marijuana use and treatment, managed care, women and violence, and opioid treatment, as well as the replicability of exemplary treatment approaches (e.g., methamphetamine treatment) and the evaluation of best practices for targeted populations (e.g., exemplary adolescent treatment).

CSAT's evaluation experiences have reinforced the fact that substance abuse treatment evaluation involves a standard set of tasks that generally occur in the following order:

- **Planning the evaluation**, which includes setting the evaluation goals and objectives that determine the overall parameters of the evaluation
- **Selecting the evaluation design**, which sets forth the overall strategy for establishing the evaluation questions, measurement approach, and generalizability of findings

- **Developing the data requirements**, which flow from the evaluation questions and measures and include SDU, clinician, cost, and client data
- **Developing data collection instruments**, which are based on the data requirements and are developed or selected from a standard inventory of instrumentation
- **Collecting the data**, which includes the development of data management processes and tools including quality control procedures, and collecting the data
- **Analyzing the data**, which involves developing an analysis plan and conducting multiple levels of comparison; the analysis process is governed by the analysis plan and intended products and target audience(s)
- **Reporting the evaluation findings**, which includes evaluation knowledge dissemination and application within field.

CSAT has directed the development of evaluation concepts, methods, and tools to support these evaluation tasks. The evaluation tasks and corresponding evaluation methods are summarized in Exhibit I, Appendix A. A full discussion of the CSAT evaluation analytic framework and the other evaluation concepts and tools (the Integrated Evaluation Methods Package), is presented in the concept paper: *Integrated Evaluation Methods: A Guide for Substance Abuse Treatment Knowledge Generating Activities*. The IEM package is referenced in Appendix A, and is being made available through the Caliber Associates NEDS contract Web site at http://neds.calib.com.

2. IMPORTANCE OF COST ANALYSIS IN EVALUATIONS

Rapid and dramatic changes are being made to the management, delivery, and financing of substance abuse treatment. These changes have strong implications for, and place significant demands on, the publicly financed substance abuse treatment system. Increasing importance is being placed on knowing the "cost" of treatment, while what actually constitutes "treatment" seems to be changing.

The thesis of this paper is that cost analyses should receive much greater emphasis in the evaluation of substance abuse treatment service operations. Such information is invaluable right now. Moreover, reliable and rigorous methodologies for cost analyses are currently available. CSAT-funded substance abuse treatment providers must undertake cost analyses, as well as process and outcome evaluations, in order to gain information that will allow them to fully

capitalize on the significant investments that are being made in services in the name of generating and improving knowledge about substance abuse services.

The rest of this document will expand upon these themes and identify an approach for incorporating cost information in substance abuse treatment evaluation activities. The primary emphasis will be given to a Uniform System of Accounts and Cost Reporting for Substance Abuse Providers, a treatment cost method developed for CSAT, which has already been tested on over 140 treatment providers. The adoption and application of this cost method could potentially move CSAT evaluation activities and the treatment field forward significantly in the search for efficiency/value.

To address efficiency/value, a meaningful evaluation must incorporate:

- Cost analysis
- Process evaluation
- Outcome evaluations.

Like a three-legged stool, all three components are needed in order to have a secure place to sit.

3. ORGANIZATION OF THIS DOCUMENT

The cost discussion is presented in the following sections:

- Section I, the Introduction, provides an overview of the paper
- Section II describes changes in the substance abuse treatment system that contributed to the need for cost benefit and cost effectiveness analyses
- Section III discusses cost benefit and cost effectiveness analyses
- Section IV presents an overview of the three levels of cost analyses specificity that can be incorporated into CSAT requirements, and briefly reviews the arguments for and against these approaches
- Section V presents a summary of the paper and a discussion of current and future applications of cost analysis
- Section VI summarizes cost analysis in relation to the Self-Adjusting Treatment Evaluation Model.

Appendix A contains a summary description of the Integrated Evaluation Methods package, of which this concept paper is one component; Appendix B is an explanatory note concerning the Self-Adjusting Treatment Evaluation Model (SATEM).

II. Evolution of Costs and the Substance Abuse Treatment System

As noted in the previous text, cost analysis has always been an important part of the substance abuse treatment system, but it has become increasingly more important over the past several years. At the same time, the nature of cost analysis has changed significantly because of changes in the expectations (demands) of virtually all stakeholders. This evolution in the importance and nature of cost analysis demonstrates the impact that cost analysis had on Self-Adjusting Treatment Evaluation Model (SATEM) components that contribute to knowledge development and application. (See Appendix B.)

While cost data have always been critical to the management of the substance abuse treatment system, they were never as central as they are now. The past 10 years have seen costs assume near primacy as a management concept, and old concepts and measurements of cost are giving way to new constructs. While old measurement approaches were not necessarily wrong, they were not adequate to address present or future requirements for fiscal accountability and improvement in treatment services.

Stereotypes of the "old" and "evolving" system paradigms and their associated cost concepts are compared in Exhibit II-1. This chart conveys in broad strokes how the demands for cost data have changed along with larger substance abuse treatment system changes. This comparison is not intended to suggest that the "evolving system" is superior to the "old system." Rather, it attempts to suggest why and how the system is evolving and to indicate components of the system that can bear strengthening.

Exhibit II-1
Old and Evolving Cost Paradigms in Substance Abuse Treatment

THE OLD PUBLIC SYSTEM	THE EVOLVING COST SYSTEM
Treatment Rationing	Treatment Entitlement
Maximize Outcome	Minimize Cost
System Expenditures	Population Expenditures
Provider Budgets	Cost/Utilization per Beneficiary
Treatment Slot Cost	Cost per Treatment Episode
Provider Expenditures	Cost per Unit of Service

Source: The Lewin Group.

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The most fundamental change occurring in the system's management is movement from treatment rationing to treatment entitlement. The public system has historically operated with a prospectively determined fixed annual budget, with an associated expected ability to pay for a certain amount of care. At the same time, policy makers have understood that this budget was not equal to the demand or need for care. There has been an acceptance of waiting lists, or queuing. Implicit in this system was the recognition that many of those who were wait-listed disappeared, which served to limit demand. Although resources per unit of treatment capacity (treatment slot) were carefully managed in this system, once a client occupied a slot, a provider could often retain clients in treatment for relatively longer durations to improve client outcomes. Providers were accountable for types and amounts of expenditures relative to current client enrollment, but had more discretion in terms of the mix of types of services delivered to clients.

In contrast, the new cost environment is shifting to "treatment entitlement," accompanied by strong pressures to keep costs down. Some would also suggest that financing and coverage of substance abuse treatment is moving toward "mainstreaming" with the rest of health care. Under such a scenario, an individual is entitled to treatment if "need" is demonstrated, given that the benefit has not been exhausted. (Ignore, for the moment, that substance abuse and mental health treatment benefits tend to have much lower "caps," or limits, than somatic disorders.) Access to care becomes a major issue when there is entitlement.

The recent over-riding focus of mainstream health care financing is on cost containment. Because the entitlement nature of insurance makes it somewhat difficult to limit initial access to care, there is more emphasis on controlling costs per treatment episode. This means that duration of care, service mix, and costs per unit of treatment service are more closely monitored and controlled. In this environment, there is often not as much data collected related to the quality of care, nor is there sufficient effort expended to relate quality to duration of care, specific types of services provided, or cost per unit of service. Reimbursement arrangements are increasingly shifting financial risks to providers, using competition among providers to control costs at a time when there is a lack of generally accepted and endorsed objective standards for quality.

Treatment providers who have historically focused more on clinical management of their caseload, given a fixed budget, are now being driven to even greater efforts to economize. It is important to recognize that the cost and data requirements of the new environment are materially different from the old system.

One type of data that will be fundamental to the evolving substance abuse delivery system is efficiency/value data that contrast quality/outcomes to costs. Such data cannot be developed, however, without addressing the cost accounting changes in the new system.

Cost accounting has proven challenging to many existing publicly financed treatment providers. The central points of this paper are:

Efficiency/value data that contrast quality/outcomes to costs is fundamental to the evolving substance abuse treatment delivery system.

- There are methodologies and tools to measure costs
- Incorporating these tools in substance abuse treatment evaluations would yield more comprehensive results
- These applied methods can be used as tools to assist the treatment services community to operate in the evolving environment.

The other components of the efficiency/value equation—quality/outcomes—are already being addressed in other facets of the evaluation designs CSAT is advocating through the SATEM.

III. Types of Cost Studies

Several different types of cost studies are often discussed almost interchangeably despite the fact that they are fundamentally different from each other:

- Cost analysis (CA)
- Cost effectiveness analysis (CEA)
- Cost benefit analysis (CBA).

Types of Cost Studies

- Cost analysis (CA) attempts to estimate the expense of delivering the services, but provides no information regarding quality or effectiveness.
- Cost effectiveness analysis (CEA) uses a single outcome measure for comparison. In such analyses, the outcome measure is contrasted to the cost of treatment, and ratios of outcome to cost are compared for each alternative considered.
- Cost benefit analysis (CBA) is used when there are multiple outcome measures, and efficiency comparisons across different outcomes yield different conclusions.

These analyses are actually quite different from the perspective of economics and in terms of their rigor and difficulty. Cost analysis (CA) simply attempts to estimate the expenses of delivering the services. Equivalent cost data for different service providers allow comparisons to be made of the relative expenses for treating substance abusers, and even the relative cost of specific components of service. However, CA by itself yields no insights into the quality or effectiveness of the care that is delivered.

Efficiency/value conclusions can only be generated from cost effectiveness and cost benefit analysis (CEA and CBA, respectively). The explicit objective of such analyses is to analyze whether resources (funds) are being used more or less efficiently in different treatment settings. These analyses can be framed as comparing:

- Treatment (of some type) versus no treatment
- Treatment A versus treatment B (versus C, D, etc.)
- No treatment versus treatment A versus treatment B (versus C, D, etc.).

Thus, in a fundamental respect, CEA and CBA are similar in their purpose, but they differ in the complexity of their assessment of outcomes.

Cost effectiveness studies only use a single outcome measure for comparison, such as the proportion of clients abstinent or the proportion with no arrests at 6 or 12 months post treatment. The outcome measure is contrasted to the cost of treatment, and the ratios of outcome to cost are compared for each alternative examined in the study. If two alternatives yield the same outcome, then the less expensive is considered more efficient. If two alternatives cost the same, but one has a better outcome, then it is more efficient. If an alternative has both a better outcome and costs more, then policy makers must evaluate the trade-off and decide if they are willing to pay more to get more.

The primary weakness of CEA is that only a single outcome can be examined at a time, although it is possible to make multiple CEA comparisons (using a number of different outcome measures) across the alternatives. If all of the CEA comparisons support the same efficiency conclusion there is no problem. However, the results of CEA can be difficult to interpret when there are multiple outcomes of interest (e.g., one alternative performs better on some measures, and (an)other alternative(s) perform(s) better on other outcomes).

Cost benefit analysis (CBA) is necessary when there are multiple outcome measures, and efficiency comparisons across different outcomes yield different conclusions. The objective of CBA is essentially to weight the various outcome dimensions into a single outcome (benefit) index, which can then be contrasted to the costs in order to judge relative efficiency.

Typically such benefits measures are constructed using economic (dollar) values for each outcome measure and summing across the measures to generate a composite benefit measure. Economic values, thus, constitute the weighting central to the "index." Analysts skilled in economic theory and measurement construct such "indices." Treatment alternatives can then be compared by contrasting the ratios of benefits to the dollar cost of the treatment. The implication of a treatment alternative having a superior (higher) ratio of benefits to costs is that greater aggregate benefits can be achieved by investing scarce treatment dollars into that alternative.

The implications of a treatment alternative having a higher ratio of benefits to costs is that greater aggregate benefits can be achieved by investing scarce treatment dollars into that alternative.

Both cost analysis and outcome analysis are required to perform efficiency/value studies, be they CEA or CBA studies. Again, other CSAT documents such as the Self-Adjusting Treatment Evaluation Model address study design and outcome analysis. The remainder of this paper concentrates on the analysis of costs and the options that may be employed for this purpose.

IV. Toward a Design for Cost Analysis for CSAT Demonstrations and Knowledge-Generating Activities

The CSAT Knowledge Development and Application (KD&A) programs, affiliated cross-site efforts, and national evaluation study designs present a strong opportunity to advance the methodology and practice of cost analysis for substance abuse treatment. Treatment demonstrations such as those supported by CSAT's KD&A programs are explicitly intended to advance knowledge that can promote the effectiveness and efficiency of the nation's substance abuse treatment system. To date, much more emphasis has been placed on effectiveness (through process and outcome evaluations), however, than on cost and/or efficiency or value. It is proposed that treatment demonstrations should:

- Analyze both treatment effectiveness (outcomes and process) and costs
- Examine both the total cost of care and of specific components of care (particularly of "interventions" that are being demonstrated)
- Use consistent and comprehensive cost methodologies across CSAT-funded treatment providers.

The need to articulate an evaluation approach to cost analysis is driven by the simple fact that CSAT and the treatment services evaluation field currently can present very little methodologically comparable cost data related to demonstrations funded to date. The lack of cost data is true for all types of treatment services that have been supported under CSAT demonstrations:

- Systems enhancements (Target Cities, Linkage and Outreach, Managed Care)
- Services for specific populations (e.g., Women and Children, Correctional Treatment, Adolescent Treatment)
- Particular components or interventions (HIV services, mental health, employment, marijuana and methamphetamine interventions).

The CSAT approach to evaluation and evaluation requirements has clearly undergone a significant shift as evidenced by:

- Mega evaluations such as the National Treatment Improvement Evaluation Study (NTIES)

- Individual evaluations
- Requirements that each provider perform process and outcome evaluation
- Providers being given minimum specifications for evaluation design and content
- Design and implementation of cross-site evaluations with a uniform design and common data elements for all projects in a demonstration
- Development of minimum data sets and a common analytic framework and an integrated evaluation methodology for use across CSAT program areas.

The enhanced emphasis on knowledge generation that is embodied in the CSAT knowledge development and application initiatives, combined with a cost analysis methodology yield the bundle of analytic methods necessary to incorporate cost data into the evaluation of treatment demonstrations.

The initial CSAT approach was to undertake the NTIES mega evaluation cutting across most of the demonstrations funded in FY 90-91. While this yielded consistent data about organizations that had their clients sampled for inclusion in NTIES and produced reliable data about these CSAT program areas, it was not actually designed to yield data or inferences about individual providers or programs not included in the sample (e.g., residential women and their children, AIDS outreach, etc.). These types of mega evaluation studies are invaluable, but cannot address all of the evaluation needs in a field as diverse as substance abuse treatment. Another limitation to the approach utilized in NTIES is the significant time lag related to the design and implementation of a large nationwide study. In contrast, individual providers can move more quickly in designing and executing their particular evaluations, and opportunities for high quality evaluation are significantly improved if sites employ consistent study designs and collect consistent data.

Realizing that an NTIES would not necessarily address the most important evaluation questions for individual CSAT demonstrations over time, CSAT also began to require evaluations (process and outcome) of individual providers of treatment services in FY 93. The experience of the past several years, however, has shown that non-specific requirements for providers to perform process and outcome evaluations has been of limited utility. First of all, process and outcome evaluation requirements have generally been construed to not include cost analysis (although cost analysis could be performed under the process analysis rubric). Second, most local evaluators and managers who asked about evaluation requirements are unequivocal in

their desire to have early and more specific guidance from CSAT about what activities to evaluate and how to evaluate them. CSAT has in fact moved in the direction of incorporating such guidance or standards in the initial Government Guidance for Applicants (GFAs). Even with such requirements, however, the findings from individual grant activities are not comparable to each other due to differences in designs. To address this, in FY 95 CSAT began to establish specific requirements for evaluation designs that CSAT-funded treatment service providers were responsible for incorporating into their "local" evaluations.

This paper articulates the rationale for expanding this evaluation strategy to include cost analysis, and hopefully promotes performing cost effectiveness and cost benefit studies. The following sections describe three approaches to cost analysis which can be incorporated into evaluation requirements, and briefly reviews the arguments for and against these approaches. The three approaches for cost analysis being considered by CSAT are:

- Cost analysis with limited CSAT specifications regarding approach
- Analysis with specialized CSAT protocols for each CSAT-funded treatment provider
- Analysis with same CSAT specifications applied across all CSAT-funded treatment providers.

These three approaches reflect different levels of CSAT specificity for the CSAT analysis that would be conducted by CSAT-funded treatment service providers.

1. LIMITED COST SPECIFICATIONS

Under this approach, CSAT would present substance abuse treatment service providers with general guidelines for the analysis of the costs of their activities. This approach would direct cost analysis of services supported by CSAT. Moreover, these services would need to be separated and distinguished from services not receiving CSAT support. For example, if a provider receives support to add child care services in order to enable women to participate in treatment, the cost analysis should produce estimates of the expense of those services, incorporating and reporting data on the rate of utilization of the services as well as on the inputs necessary to deliver child care services (e.g., staffing, space, utilities, supplies). Other analyses could examine the costs involved with delivering other services to a parent; however, the main focus would be on the CSAT-funded intervention.

The use of limited specifications has the primary advantage of giving treatment providers maximal flexibility to address unique aspects of their services. There are, however, significant disadvantages to this approach. First, it will be impossible to make comprehensive and valid comparisons across demonstration activities and to discern if various approaches to the same service/intervention are more or less expensive or more or less efficient (comparing outcome to cost). Second, it severely limits the ability to generalize findings and to inform the field about the general cost or efficiency of a type of service. Variations in costs may be artifacts of different cost accounting methodologies rather than actual differences. Even so, an important first step is to incorporate cost data in the evaluation strategy of substance abuse treatment demonstrations.

2. SPECIALIZED COST SPECIFICATIONS FOR A GIVEN PROGRAM AREA

A step beyond the limited specification approach is to develop specialized specifications for each CSAT program area. Again, this methodology would require cost analysis to focus on and distinguish the particular services/interventions that are supported by CSAT, and analyze the other components linked to the service. Unlike the limited approach, this methodology would define specific cost accounting methods for estimating costs, and would also utilize appropriate and standardized accounting principles.

The primary advantage of this approach is that it would promote detailed and specific analyses of all of the treatment service providers within a program area, and would provide particular insights into the services/

Advantages and Disadvantages of Different Cost Analyses

Level of CSAT Specification for:

Type	Advantage	Disadvantage
Limited	Maximum flexibility for unique needs	Inability to compare or generalize
Specialized	Comparison of similar projects	Inability to compare across providers or generalize
General	Can be utilized across CSAT program areas	Requires related expertise

interventions that are the focus of the CSAT program area. This will also begin to put into place knowledge-generating capability.

This approach also has disadvantages. First, the specialized nature of the cost methodology, while allowing rigorous comparisons across the local implementation sites in the program areas, might not be comparable to or useful for broader purposes. By focusing on a particular CSAT program area (e.g., Residential Women and Children, Criminal Justice Network, HIV Outreach, or Managed Care), more attention may be given to aspects of cost that are less important in other types of treatment settings (e.g., prenatal and child care). Thus, it may not be possible to make rigorous comparisons across CSAT program areas, or to generalize programs in the general system unless extensive work is done in the design stage to ensure comparability.

Finally, it may simply require too much time to initiate development of a rigorous cost-estimation methodology that meets highly specialized needs for one CSAT program area, but also maintains comparability to other program areas. In terms of methodology development, this approach would be very costly. This may also entail some duplication of effort, unless there is close coordination across the development efforts.

3. GENERAL COST SPECIFICATIONS ACROSS PROGRAM AREAS

The most productive approach is to develop a cost estimation methodology that is appropriate for utilization within all CSAT program areas. Such a cost methodology has been developed at the direction of CSAT's Program Evaluation Branch. Known as the "Uniform System of Accounting and Cost Reporting for Substance Abuse Treatment Providers," it was developed for the Center for Substance Abuse Treatment by accounting experts at Capital Consulting Corporation in conjunction with a national expert panel. The Uniform System of Accounting can serve as the basis for cost analyses performed by service providers as part of the CSAT knowledge-generating activities. The Uniform System of Accounting applies standard accounting principles and techniques to generate a cost estimation methodology specifically for substance abuse treatment services (Capital Consulting Corporation, 1993, 1994, and 1995; Lewin-VHI, Inc., 1995). The Uniform System was developed for CSAT with the intention of providing a generally available and applicable standard cost estimation methodology for the substance abuse treatment field. Such a tool facilitates valid and reliable comparisons of costs across providers, as well as assists individual providers in estimating the cost of their services (and service components). This would give providers accurate cost information with which to

negotiate treatment contracts with managed care and public treatment authorities as well as provide cost data to assess and improve their own services.

This methodology has been piloted to estimate the costs for over 140 substance abuse treatment service delivery units (SDUs) across the nation since 1992. Most of these have been treatment providers funded by CSAT, across many different program areas. Types of services analyzed have included day treatment, outpatient, community-based residential, hospital-based detoxification and rehabilitation, and methadone maintenance (Capital Consulting Corporation, 1994; Lewin-VHI, Inc., 1995). The methodology has been applied to "systems," such as Target Cities demonstrations and has proven amenable to analyses of centralized system components such as central intake units.

The Uniform System of Accounting requires:

- Comprehensive data about expenditures by SDU
- Unit cost estimates for all services
- Allocation of cost by service
- Unit cost (service cost divided by number of units).

The initial step in the approach of the Uniform System is to acquire comprehensive data about expenditures for substance abuse service providers by SDU, including all of the general categories of expenses which are presented in Exhibit IV-1 (Capital Consulting Corporation, 1993). Note that these are categories of expenses and that under each category there may be numerous items. For example, administration costs include the services of various different types of personnel, equipment rental/service/supplies, various professional services (e.g., legal, bookkeeping), telephone, insurance, and other. It is also necessary to count direct salaries, fringe benefits, and payroll taxes for all personnel.

EXHIBIT IV-1
TYPES OF EXPENSES OF SUBSTANCE ABUSE TREATMENT PROVIDERS

Administration	Psychiatrist
Facility and Grounds	Psychologist
Dietary	Social Worker
Laundry	Certified Addiction Counselor
Housekeeping	Vocational Therapist
Medical Care	Recreational Therapist
Laboratory	Other Therapists
Depreciation, Rent, and Interest	

Source: Capital Consulting Corporation, 1993.

The ultimate product of the Uniform System is unit cost estimates for 13 broad types of services that comprise virtually all of the activities of substance abuse treatment providers. These services are identified and defined in Exhibit IV-2. Note that each "type" of service may actually be comprised of a number of related types of services, such as medical/diagnostic services, which could well include tests for TB, hepatitis, and pregnancy, as well as many others.

Also, for each type of service, a unit of service measurement is defined, primarily in order to allow costing per unit of service. The most typical unit of service is the number of clients treated by the provider over the time period, although other important units are the number of individual and group counseling hours delivered.

Clearly, the objective of the Uniform System is to generally characterize the level of resources being put into discrete types of services. This methodology could be extended in order to define more narrowly precise types of services, and to estimate costs for those services. The national expert committee judged that the 13 types of services would constitute a solid initial typology that would start the field moving toward greater cost awareness.

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EXHIBIT IV-2
SUBSTANCE ABUSE PROVIDER UNIT SERVICES

TYPE OF SERVICE	UNIT OF SERVICE
Initial Assessment	Number of Assessments
Medical Examination	Number of Clients
Psychosocial Examination	Number of Clients
Individual Counseling	Number of Counseling Hours
Group Counseling	Number of Counseling Hours
HIV Testing/Counseling	Number of Clients Counseled
Medical/Diagnostic Services	Number of Medical Examinations
Housing and Food Services	In-residence Days
Clinical Case Management	Number of Cases
Networking/Outreach	Number of Contacts
Child Care Services	Number of Children
Staff Education	Number of Hours
Client Education	Number of Cases
Total	Number of Clients

Source: Capital Consulting Corporation, 1993.

The core of the Uniform System is comprised of a large number of allocation rules for translating expenses into unit costs for each type of service. This may be simplistically represented by Exhibit IV-3, which shows that the Uniform System ultimately translates expenses by category into expenses by type of service. Specifically, a provider starts with total expenses by category (listed across the top of the table) and allocates these within a column across the respective services (listed down the side of the table). Once total expenses by type of service are summed, this is divided by the number of units of that type of service that have been delivered during the period being studied. A version of this approach is being incorporated into the revised financial pages of CSAT's quarterly progress financial reporting formats for the demonstration projects.

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EXHIBIT IV-3
COST ANALYSIS: TRANSLATING EXPENSES INTO UNIT COSTS

TYPES OF SERVICES	CATEGORIES OF EXPENSES																
	Administration	Facility and Grounds	Dietary	Laundry	Housekeeping/Food Services	Medical Care	Laboratory	Depreciation, Rent, & Interest	Psychiatrist	Psychologist	Social Worker	Addiction Counselor	Vocational Therapist	Recreational Therapist	Other Therapists	TOTAL COST BY SERVICE	Units of Service
Initial Assessment																	
Medical Examination																	
Psychosocial Examination																	
Individual Counseling																	
Group Counseling																	
HIV Testing Counseling																	
Medical/Diagnostic Services																	
Housing and Food Services																	
Clinical Case Management																	
Networking/Outreach																	
Child Care Services																	
Staff Education																	
Client Education																	
Total Expenses by Type																	

Source: Derived from Capital Consulting Corporation, 1993.

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An example of the final product of such a cost analysis methodology for a particular provider using the Uniform System is presented in Exhibits IV-4 through IV-6. The sample provider delivered several types of services (or operated multiple service delivery units) to homeless substance abusers, including residential care, outreach services, and transitional housing for treatment completers. The provider had total expenses of $380,000 for 1993. Application of the Uniform System of Accounts allocated these total expenses into $240,000 for the residential treatment phase, $35,000 for outreach services, and $95,000 for transitional housing services. Further analysis broke those costs down by the 13 types of services, and calculated the costs per unit of service.

Note that in this multi-service organization there were expenses for networking/outreach in both the designated "outreach" service and in the residential service delivery unit, where it was estimated that counselors on average put 15 minutes per week into this activity. Thus, outreach accounted for $25,000, or about 10 percent of the total budget, and was allocated across 57 total clients at a cost of $437 per client. In contrast, the dedicated outreach services had a total budget of $35,000, and accomplished 6,800 contacts over the year, for a cost per contact of about $5.

HIV testing and counseling was delivered at the residential unit ($1,700 per year, or $29 per client); but, if it was performed as part of outreach services, it could not be broken out for purposes of cost allocation. Housing services constituted the largest portion of total costs, about 55 percent ($30.00 per client night) in the residential setting, and 99 percent of costs ($11.31 per night) in the transitional setting.

The Uniform System has been used to develop cost estimates for over 140 substance abuse service delivery units since 1992. During this time the allocation methodology has been tested and refined to the point that the methodology appears to be ready for broader application to CSAT-sponsored substance abuse treatment knowledge-generating activities.

EXHIBIT IV-4

COST PROFILE FOR A RESIDENTIAL SERVICE DELIVERY UNIT (SDU) OF A MULTI-MODALITY PROVIDER

Location: Urban
FYE: December 31, 1993

Residential for the Homeless
Program Cost Profile

UNITS OF SERVICE	UNIT MEASUREMENT	PROGRAM COST	UNITS	UNIT COSTS	PER CLIENT AVERAGE
Initial Assessment	Number of Assessments	$3,945	57	$69.21	$69.21
Medical Examination	Number of Clients	$198	57	$3.47	$3.47
Psychosocial Evaluation	Number of Clients	$3,945	57	$69.21	$69.21
Individual Counseling	Number of Counseling Hours	$9,633	240	$40.14	$169.00
Group Counseling	Number of Counselor Hours	$18,035	768	$23.48	$316.40
HIV Testing/Counseling	Number of Clients Counseled	$1,661	57	$29.14	$29.14
Medical/Diagnostic Services	Number of Medical Examinations	$450	57	$7.89	$7.89
Housing and Food Services	In-residence Days	$133,942	4,472	$29.95	$2,349.86
Clinical Case Management	Number of Cases	$24,918	57	$437.16	$437.16
Networking/Outreach	Number of Contacts	$24,918	57	$437.16	$437.16
Child Care Services	Number of Children	$0	0	$0.00	$0.00
Staff Education	Number of Hours/Clients	$2,506	57	$43.96	$43.96
Client Education	Number of Cases	$2,158	57	$37.86	$37.86
Client Transportation	Number of Clients	$14,016	57	$245.89	$245.89
TOTAL		**$240,325**	**6,050**	**$1,474.52**	**$4,216.23**

The Residential Drug Treatment for the Homeless Program is a "social model program" utilizing life experiences. This social model program includes solution focused therapy; group awareness; education on the disease concept; and information and referral. All residents are encouraged to participate in a 12-step fellowship. The services are designed for a minimum of 3 months and a maximum of 6 months. The average length of stay was 39 and 79 days for fiscal years 1992 and 1993, respectively. The provider has eight employees: one Manager/Counselor; one Clinical Supervisor/Counselor; and six Aides. Participation is voluntary. This residential unit includes the following units of services:

- Initial Assessment (2 hours by a Counselor)
- Medical Examination (as needed, by a Physician)
- Psychosocial Evaluation (2 hours by a Counselor)
- Individual Counseling (as needed; averaged 2 and 4 hours per client per stay for fiscal years 1992 and 1993, respectively, by a Counselor)
- Group Counseling (19-½ hours per week as scheduled; by a Counselor)
- HIV Testing/Counseling (1 hour of counseling per week provided by an organization funded by the State)
- Medical/Diagnostic Services (urinalysis is performed once a week for the first 3 months; every 2 weeks for the next 3 months; and, monthly thereafter)
- Housing and Food Services (residents perform their own cleaning, food shopping, cooking, and ground/building maintenance)
- Clinical Case Management (15 minutes per week by Counselor)
- Transportation Services (averages two trips per day encompassing an average of 3 hours per day for an Aide, i.e., 21 hours per week)
- Client Education (1 hour per week by Counselor)
- Staff Education (2 hours monthly, provided by volunteers)

Source: Capital Consulting Corporation, 1995.

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EXHIBIT IV-5

COST PROFILE FOR A RESIDENTIAL SERVICE DELIVERY UNIT (SDU) OF A MULTI-MODALITY PROVIDER

Location: Urban
FYE: December 31, 1993

Outreach for the Homeless
Program Cost Profile

UNITS OF SERVICE	UNIT MEASUREMENT	PROGRAM COST	UNITS	UNIT COSTS	PER CLIENT AVERAGE
Initial Assessment	Number of Assessments	$0	0	$0.00	$0.00
Medical Examination	Number of Clients	$0	0	$0.00	$0.00
Psychosocial Evaluation	Number of Clients	$0	0	$0.00	$0.00
Individual Counseling	Number of Counseling Hours	$0	0	$0.00	$0.00
Group Counseling	Number of Counselor Hours	$0	0	$0.00	$0.00
HIV Testing/Counseling	Number of Clients Counseled	$0	0	$0.00	$0.00
Medical/Diagnostic Services	Number of Medical Examinations	$0	0	$0.00	$0.00
Housing and Food Services	In-residence Days	$0	0	$0.00	$0.00
Clinical Case Management	Number of Cases	$0	0	$0.00	$0.00
Networking/Outreach	Number of Contacts	$34,746	6,802	$5.11	$5.11
Child Care Services	Number of Children	$0	0	$0.00	$0.00
Staff Education	Number of Hours/Clients	$0	0	$0.00	$0.00
Client Education	Number of Cases	$0	0	$0.00	$0.00
Client Transportation	Number of Clients	$0	0	$0.00	$0.00
TOTAL		**$34,746**	**6,802**	**$5.11**	**$5.11**

The Outreach for the Homeless Project consists of a single full-time Outreach Worker. The purpose of the demonstration is to provide street outreach to homeless addicts and/or homeless people at risk, to inform them of available drug treatment options, and, when possible, to make direct referrals to treatment services. The Outreach Worker maintains a system to document contacts and certain demographics.

This outpatient project includes the following unit of service:

- Network/Outreach

Source: Capital Consulting Corporation, 1995.

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EXHIBIT IV-6

COST PROFILE OF A TRANSITIONAL LIVING SERVICE DELIVERY UNIT OF A MULTI-MODALITY PROVIDER

Location: Urban
FYE: December 31, 1993

Transitional Living for the Homeless
Program Cost Profile

UNITS OF SERVICE	UNIT MEASUREMENT	PROGRAM COST	UNITS	UNIT COSTS	PER CLIENT AVERAGE
Initial Assessment	Number of Assessments	$0	0	$0.00	$0.00
Medical Examination	Number of Clients	$0	0	$0.00	$0.00
Psychosocial Evaluation	Number of Clients	$0	0	$0.00	$0.00
Individual Counseling	Number of Counseling Hours	$0	0	$0.00	$0.00
Group Counseling	Number of Counselor Hours	$0	0	$0.00	$0.00
HIV Testing/Counseling	Number of Clients Counseled	$0	0	$0.00	$0.00
Medical/Diagnostic Services	Number of Medical Examinations	$205	42	$4.88	$4.88
Housing and Food Services	In-residence Days	$95,362	8,429	$11.31	$2,270.52
Clinical Case Management	Number of Cases	$0	0	$0.00	$0.00
Networking/Outreach	Number of Contacts	$0	0	$0.00	$0.00
Child Care Services	Number of Children	$0	0	$0.00	$0.00
Staff Education	Number of Hours/Clients	$0	0	$0.00	$0.00
Client Education	Number of Cases	$0	0	$0.00	$0.00
Client Transportation	Number of Clients	$0	0	$0.00	$0.00
TOTAL		**$95,567**	**8,429**	**$11.31**	**$2,275.40**

The Transitional Living Program provides transitional alcohol- and drug-free housing for homeless addicts to promote independent, addiction-free living. The services are for those individuals who have successfully completed the drug treatment phase of the project. There is no individual or group counseling in regard to substance abuse.

The average length of stay for fiscal year 1993 was 201 days. The transitional living unit is staffed by one full-time Residential Manager and one part-time (i.e., 25%) Bookkeeper. Participation is voluntary.

The following units of service are included:

- Medical/Diagnostic Services (urinalysis is performed randomly or based on suspicion)
- Housing (residents perform their own cleaning; food shopping; cooking; and ground building maintenance).

Source: Capital Consulting Corporation, 1995.

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V. SUMMARY

Evolution of cost analysis in substance abuse treatment is almost a perfect example of how the Self-Adjusting Treatment Evaluation Model (SATEM) contributes to Knowledge Development and Application (KDA). Cost analysis should be a learning community activity. Cost analysis generates knowledge that is useful for service providers for system decision-making and for policy-making. To the extent that such knowledge actually affects operations or policies, it provides for self-adjustment. In order to assess the value of services provided by substance abuse providers, cost evaluation data are now being used in conjunction with performance evaluation data. Useful cost analysis requires integration of evaluation, clinical knowledge, and multidisciplinary training.

Cost analysis is necessary if treatment evaluations are going to examine efficiency or value in substance abuse treatment. Cost analysis data in conjunction with outcome data will make it possible to perform cost effectiveness and cost benefit analyses. There are very strong arguments for this.

Between the three options outlined, experience has shown that service providers and evaluators do not prefer the "limited specification" approach. If anything, they have shown a strong preference for clear standards for performing evaluations. This preference is likely to be even stronger for cost analyses than it is for process and outcome evaluations, since many treatment providers perceive themselves or their evaluators as having the relevant expertise to conduct cost studies. Further, there are few models of cost analysis from which they can draw.

The "Uniform System of Accounts" offers a methodologically sound model for performing cost analyses that are directly applicable to substance abuse treatment and related services. The model was explicitly designed to yield cost data that would be highly relevant to understanding how substance abuse treatment providers use their resources. Thus, it is able to support CSAT program areas that wish to examine these matters in a more rigorous manner.

In its current form, the Uniform System can be applied to estimate costs of CSAT-supported program areas, as well as to estimate or break out the costs of particular services/interventions. The Uniform System can be adopted to meet the needs of a specific type of service or intervention, or to address a specific services research/evaluation question or focus, as demonstrated by its application in the Wrap Around Services program and the national cross-sites.

VI. CONCLUSION

This document discusses the need to conduct cost analysis when evaluating substance abuse treatment services. It presents three cost analysis strategies for CSAT demonstration treatment service providers. The paper also shows how CSAT's "Uniform System of Accounting and Cost Reporting for Substance Abuse Treatment Providers" can be used to develop cost analysis data. Full implementation of the Self-Adjusting Treatment Evaluation Model requires the use of cost analysis in combination with performance measurements, building of team capability, and assimilating CSAT's integrated methodology.

Adding "Value" To CSAT Demonstrations: The What, How, and Why of Cost Analysis provides:

- A discussion of the evolution of the importance of "cost" in the substance abuse treatment system
- A discussion of the types of cost studies, including cost analysis, cost-effectiveness analysis, and cost benefit analysis
- A discussion of the types of cost analysis designs for CSAT-funded substance abuse treatment activities
- A discussion of the "Uniform System of Accounting and Cost Reporting for Substance Abuse Treatment Providers."

It is hoped that this information will enable individual service providers and the field to better implement the Self-Adjusting Treatment Evaluation Model in order to ensure continuous knowledge development and improvement of substance abuse treatment services.

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APPENDIX A:
INTEGRATED EVALUATION METHODS PACKAGE:
A GUIDE FOR SUBSTANCE ABUSE TREATMENT
KNOWLEDGE-GENERATING ACTIVITIES—EXECUTIVE SUMMARY

APPENDIX A:
INTEGRATED EVALUATION METHODS PACKAGE:
A GUIDE FOR SUBSTANCE ABUSE TREATMENT
KNOWLEDGE-GENERATING ACTIVITIES—EXECUTIVE SUMMARY

Since its inception, the Center for Substance Abuse Treatment (CSAT) has provided Federal leadership to improve substance abuse treatment accessibility, effectiveness, and efficiency. CSAT's mission and activities have evolved from directly supporting treatment services to supporting knowledge-generating activities. This evolution is evident in the current Substance Abuse and Mental Health Services Administration policy on evaluation as described in *Evaluation Policy*, SAMHSA, 1995.

The need for an integrated model of evaluation and planning at SAMHSA is presented in "Evaluation in the Substance Abuse and Mental Health Services Administration," *Evaluation and the Health Professions*, by Marsh, Jansen, Lewis, & Straw, 1996. CSAT also supports site-specific, cross-site, and national evaluations that have provided experience with a wide array of evaluation design and implementation methods. These experiences further supported the need for an integrated evaluation strategy and led to the development of a comprehensive set of evaluation products, including concept papers, technical assistance (TA) materials, and analytic tools. Collectively, these products are referred to as the Integrated Evaluation Methods (IEM) Package. The IEM Package organizes these products within an evaluation framework that is designed to support CSAT knowledge development and application goals. The evaluation framework itself was constructed on the basis of accumulated experiences among internationally known treatment service evaluation professionals. The IEM Package reflects and incorporates evaluation experiences gained over the past decade.

Evaluation Framework and the Integrated Evaluation Methods Package

National evaluation experiences have reinforced the fact that substance abuse treatment evaluation involves a standard set of tasks that generally occur in the following order:

- **Planning the evaluation/knowledge-generating activities**, which includes selecting the substance abuse treatment issue, identifying the theoretical foundation for the intervention, determining knowledge development program goals and implementation approach, and setting the evaluation goals and objectives that determine the overall parameters of the evaluation

- **Selecting the evaluation design**, which sets forth the overall strategy for establishing the process and outcome evaluation questions, measurement approach, and generalizability of findings

- **Developing the data requirements**, which flow from the evaluation questions and measures and include: SDU, clinician, cost, and client data

- **Developing data collection instruments**, which are based on the data requirements and are developed or selected from an integrated inventory of instrumentation

- **Collecting the data**, which includes developing data management processes and tools (including quality control procedures) and conducting the data collection activities

- **Analyzing the data**, which involves multiple levels of comparison and is governed by an analysis plan

- **Reporting the evaluation findings**, which includes evaluation knowledge dissemination and application within the field.

The evaluation process outlined above provided a framework for the development of products related to these evaluation concepts and methods. Taken together, those products comprise the IEM Package.

Integrated Evaluation Methods Products

CSAT requested the development of a series of evaluation concept papers, TA materials, and tools to support and operationalize each phase in the evaluation of substance abuse treatment knowledge-generating activities. These items are included in the IEM Package. The concept papers are based on theoretical evaluation research constructs that have been adapted to substance abuse treatment services evaluation and knowledge-generating activities. The concept papers primarily support the evaluation planning phase and address such topics as the self-adjusting treatment evaluation model, cost analyses, and performance measurement. The TA materials and tools include specific evaluation methods that have direct applicability to substance abuse treatment knowledge-generating activities. The concept papers and TA materials that constitute the IEM Package are listed and briefly described in Exhibit I.

EXHIBIT I
EVALUATION FRAMEWORK AND INTEGRATED EVALUATION METHODS PACKAGE

EVALUATION FRAMEWORK	INTEGRATED EVALUATION METHODS PRODUCTS
1. Planning the evaluation/ knowledge-generating activities	■ **Integrated Evaluation Methods: A Guide for Substance Abuse Treatment Knowledge Generating Activities:** Concept paper that describes the development of an evaluation framework, evaluation concepts, and TA materials to support the framework. ■ **Self-Adjusting Treatment Evaluation Model:** Concept paper that describes an approach for integrating evaluation findings within treatment operations so as to adjust and improve service delivery. ■ **Building Team Capability to Fully Implement and Utilize the Self-Adjusting Treatment Evaluation Model:** Concept paper to assist treatment providers in building capabilities to integrate the self-adjusting treatment model within day-to-day operations and service delivery. ■ **Adding "Value" to CSAT Demonstrations:** The What, How and Why of Cost Analysis: Concept paper on the need for and types of cost analyses for CSAT demonstrations and knowledge-generating activities. (The Lewin Group) ■ **Performance Measurement for Substance Abuse Treatment Services:** Concept paper about the increasing importance of provider performance measurement and analyses and an explanation of the case-mix adjustment methodology. ■ **Client Levels of Functioning as a Component of Substance Abuse Treatment Services Evaluation**: Description of the rationale and methods for assessing client level of functioning and recommended core LOF data elements that could help to measure the effectiveness of treatment services received. ■ **Substance Abuse Treatment Evaluation Policy Notebook:** These materials are aimed at facilitating understanding of the SAMHSA policy for evaluation and federal regulations on client confidentiality and assisting evaluators to meet CSAT evaluation requirements. ■ **Substance Abuse Treatment Evaluation Resource Notebook:** The notebook contains evaluation bibliographies and listings of organizations, hot lines, on-line data bases, and contact information for obtaining assistance in evaluating treatment services.
2. Selecting the evaluation design	■ **A Guide to Process Evaluation for Substance Abuse Treatment Services:** TA tool presenting purposes of process evaluation and the application of process evaluation methods to single site and multi-site treatment services. ■ **Using Logic Models in Substance Abuse Treatment Evaluations:** TA tool describing logic model purposes and techniques for designing and planning the evaluation of treatment services. ■ **A Guide to Selecting an Outcome Evaluation Design for Substance Abuse Treatment Evaluations:** TA tool describing overall strategies for developing evaluation questions, measurement, controls, validity/reliability, sampling, design effects, and generalizability of findings. (Battelle)

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EXHIBIT I (CONTINUED)
EVALUATION FRAMEWORK AND INTEGRATED EVALUATION METHODS PACKAGE

EVALUATION FRAMEWORK	INTEGRATED EVALUATION METHODS PACKAGE
3. Developing data requirements	■ **Minimum Evaluation Data Set (MEDS): Core Data Lists:** TA tool for developing a uniform set of variables and response categories for the service delivery unit (SDU), clinician, cost, and client evaluation measures. ■ **Substance Abuse Treatment Cost Allocation and Analysis Template (SATCAAT):** User manual to analyze treatment costs by unit of service for an SDU. (Capital Consulting Corporation)
4. Developing data collection instruments	■ **Substance Abuse Treatment Services Evaluation Data Collection Instruments:** Data collection instruments that fully incorporate the MEDS and that have been field tested for validity and reliability, as follows: Service Delivery Unit (SDU) Description; Clinician Background and Practice Survey; protocols to collect Adult, Adolescent and Child (in treatment with parent) Client Data at Intake, During Treatment, at Treatment Discharge and Post Treatment; Adult and Adolescent Record Extraction forms; and a section on protection of human subjects and informed consent.
5. Collecting the data	■ **Staying In Touch: A Fieldwork Manual of Tracking Procedures for Locating Substance Abusers for Follow-up Studies (UCLA):** User manual to establish and implement client follow-up data collection systems and procedures. ■ **Strategies for Follow-up Tracking of Juvenile, Homeless, and Criminal Justice System-Involved Substance Abusers: Overview and Bibliographies, 1990-1998:** Description of tracking techniques used to increase response rates for follow-up interviews with homeless and juvenile/criminal justice involved substance abusers.
6. Analyzing the data	■ **A Guide to Substance Abuse Treatment Evaluation Data Analysis:** Recommended methods and procedures for analyzing process, SDU, clinician, cost, and client evaluation data.
7. Reporting the evaluation findings	■ **Substance Abuse Treatment Evaluation Product Outlines Notebook:** Compendium of outlines for evaluation products including evaluation plans, interim evaluation reports, final evaluation reports, replication studies, case studies, and ethnographies.

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CSAT Evaluation "Stakeholders"

Evaluation "stakeholders" are individuals, groups, or organizations that have a significant interest in how well a program or activity functions. (See P.H. Rossi, H.E. Freeman, & M.W. Lipsey, *Evaluation: A Systematic Approach, 6th Edition*, 1999.) Within the context of the IEM Package, CSAT evaluation stakeholders include CSAT senior managers, CSAT project officers, and CSAT grantees and contractors including treatment service providers, coordinating centers, study sites, site-specific evaluators, and national evaluators.

Utility of the IEM Package for CSAT Evaluation Stakeholders

While the conceptual and TA materials were developed from the perspective of the site-specific and multi-site evaluator, the concepts and TA tools have important utility for CSAT managers, project officers, and treatment service providers. The stakeholder's position determines the perspective and utility of the IEM Package concepts and tools. For example, a CSAT senior manager can use the IEM Package to acquire a comprehensive evaluation context for planning and funding the knowledge-generating activities, the project officer can use the IEM Package to ensure that GFA/RFP applications are complete and include a full complement of design, execution, and product components, and the site-specific and multi-site evaluators can use the IEM Package to ensure that evaluation designs, data collection plans, data analyses, and product development have a consistent evaluation framework and compatible data across program areas. The suggested utility of the IEM Package for CSAT evaluation stakeholders is summarized in Exhibit II.

EXHIBIT II
UTILITY OF IEM PACKAGE FOR CSAT EVALUATION STAKEHOLDERS

STAKEHOLDERS	ROLES AND RESPONSIBILITIES	IEM PACKAGE UTILITY
SENIOR MANAGERS	■ Policy development ■ Issue identification for KD&As ■ Grant/contract funding decisions ■ Overall program management ■ Sustainability ■ Dissemination ■ Long-term strategic planning ■ Program designs ■ KA activities	■ Comprehensive evaluation framework ■ Comprehensive evaluation components ■ Roles and responsibilities for local/national evaluators as well as CSAT/grantee staffs ■ Guidance for evaluation designs and products ■ Standardized evaluation measures ■ Logic models for program and evaluation design
PROJECT OFFICERS	■ GFA/SOW development ■ Grant/contract application review ■ Grant/contract monitoring ■ Knowledge-generating products ■ Identification and replication of promising practices ■ Technical assistance assessment	■ Guidelines for high-quality evaluation designs (process and outcome) ■ Logic models for program and evaluation designs ■ List of evaluation measures with instrumentation ■ Guidelines for evaluation products
GRANTEES: STUDY SITES	■ Grant applications ■ Project development, implementation ■ Local evaluation management ■ Local evaluation coordination ■ Knowledge-generating product development	■ Evaluation plan outline ■ Process and outcomes evaluation designs ■ SDU, clinician, cost, and client measures ■ Roles and responsibilities for grantee provider/evaluator staff ■ Guidelines for evaluation products
GRANTEES: MULTI-SITE EVALUATORS	■ Grant applications ■ Comprehensive evaluation designs ■ Evaluation implementation: – Data collection – Data analysis – Reporting evaluation findings ■ Evaluation product development	■ Evaluation concepts ■ Logic models ■ Evaluation designs ■ Evaluation data requirements ■ Data collection instrumentation ■ Data collection process and procedures ■ Data analysis ■ Product development
NATIONAL EVALUATORS/ SERVICES RESEARCHERS	■ Contract applications ■ Comprehensive evaluation designs ■ Evaluation implementation: – Data collection – Data analysis – Reporting evaluation findings ■ Evaluation product development	■ Evaluation concepts ■ Logic models ■ Evaluation designs ■ Evaluation data requirements ■ Data collection instrumentation ■ Data collection process and procedures ■ Data analysis ■ Product development

IEM products and other evaluation materials may be obtained from:
http://neds.calib.com

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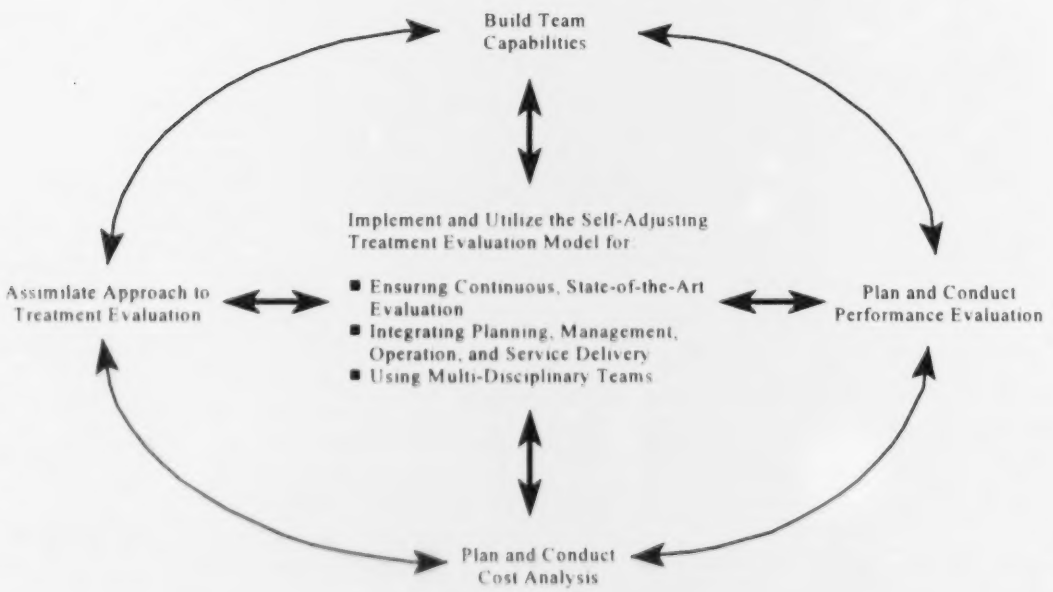
APPENDIX B:
EDITOR'S NOTE

EDITOR'S NOTE

This document is one of a series of papers that describe CSAT's approach to substance abuse treatment evaluation. The graphic below illustrates the continuous evaluation knowledge development and application process which characterizes CSAT's approach. At the core is the self-adjusting treatment evaluation model which is the foundation. The model integrates continuous, state-of-the-art evaluation with planning, management, operation, and service delivery within a multi-disciplinary learning community. Implementation of this model requires building of team capabilities, appropriate, state-of-the-art performance evaluation and cost analysis, and assimilation of CSAT's integrative approach to treatment evaluation and integrative methodologies. Each of these processes work together to ensure continuous improvement.

ENSURING CONTINUOUS EVALUATION KNOWLEDGE DEVELOPMENT AND APPLICATION


Build Team Capabilities
Implement and Utilize the Self-Adjusting Treatment Evaluation Model for
Ensuring Continuous, State-of-the-Art Evaluation
Integrating Planning, Management, Operation, and Service Delivery
Using Multi-Disciplinary Teams
Assimilate Approach to Treatment Evaluation
Plan and Conduct Performance Evaluation
Plan and Conduct Cost Analysis

Substance abuse treatment providers are increasingly called upon to demonstrate that they are delivering appropriate services, that those services have the desired impact, and that the services justify the costs. An ongoing process of evaluation and systems/services improvement integrated into the day-to-day operation of treatment providers is needed to do so. In addition, the evaluation and improvement process requires a multi-disciplinary team that includes treatment personnel, evaluators, Federal and State agencies, advocacy groups, funding agencies, and the community. Building team capability is integral to this approach. Treatment staff must be involved in knowledge development and application (i.e., planning and implementing evaluation efforts, incorporating changes in response to new knowledge, and sharing of findings).